SANITARY SYSTEMS NEW INSTALLATION/CLOSURE PLAN

BAYARD CUTTING ARBORETUM STATE PARK

INTERAGENCY TRANSMISSION

Prepared For: New York State Office of Parks, Recreation and Historic Preservation
Long Island Region
Belmont Lake State Park

Submitted to: EPA Region 2
Ground Water Compliance Section
290 Broadway, 20th Floor
New York, NY 10007-1866

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1200 Veterans Memorial Highway
Hauppauge, NY 11788

May 19, 2016

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New Installation/Closure Plan for Class V
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Location: Bayard Cutting Arboretum
440 Montauk Highway
Great River, NY 11739

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DESCRIPTION OF PARK

Bayard Cutting Arboretum is a 691-acre park originally known as the Westbrook Estate by former owner Olivia James. The estate was donated to the then Long Island State Parks Commission during the late 1920s. Bayard Cutting Arboretum is currently a State Park used for passive recreational purposes, with amenities and facilities including: an arboretum, nature trails, a historic mansion, a historic dairy barn, educational programs, and eating and comfort facilities. The site has seven outfalls which contain a combination of septic tanks, large capacity cesspools and small capacity cesspools. The park has approximately 72,000 visitors each year.

DESCRIPTION OF WORK

Attachment 1 is a spreadsheet showing both the new work and planned injection well closure at Bayard Cutting Arboretum. The work consists of upgrading large capacity cesspools to code compliant septic systems, upgrading all other cesspool system to septic systems, and decommissioning and closure of systems no longer in use. The closure of on-site systems will be performed in accordance with EPA Region 2 Underground Injection Control (UIC) Program Instructions for Class V Remediation/Closure Plans (March 16, 2015).

PROCEDURES PURSUANT TO EPA REGION 2

A. Site Schematic

A site plan is attached (Attachment 2) showing all buildings on the site and all sanitary outfalls (outfalls 1 through 7). A description of the work planned at each outfall is found in Attachment 1. The plans and specifications associated with the new installation and decommissioning of the well/systems no longer needed will be submitted to the New York State, Department of Environmental Conservation (NYSDEC) Region 1 for approval before proceeding with the work. Construction is anticipated to begin in early 2017 and be completed in the summer/fall of 2017.

B. Description of Business

With 691 acres situated on the picturesque Connetquot River, Bayard Cutting Arboretum is a passive state park where visitors can learn about the value and appearance of planned, informal plantings on a former country estate. Visitors can enjoy the serenity of a walk among the trees and along the shoreline of Connetquot River, a major tributary to the Great South Bay. Most trees are labeled so that visitors can learn how they might appear in their landscape at home. The Bayard Cutting Horticultural Club offers programs that add to the educational value of the park. http://www.bcahortsociety.org/(http://www.bcahortsociety.org/)

C. Description of Fluids Injected

The on-site systems treat only sanitary human waste. No known drains which could permit chemicals or industrial waste to enter the sanitary waste are connected to these systems.

D. Connection Between Drains and Injection Wells

The engineering firm of Cashin Associates, P.C. (CA) 1200 Veteran's Memorial Highway, Hauppauge, NY 11788, assisted by a utility mark out company, and verified connection of all drains to the subject injection wells. They utilized visual inspection, dye tests and ground penetrating radar to determine drain locations.

E. Description of Permanent Closure

Attachment 3 is a detailed specification for closure of injection wells associated with the on-site sanitary systems.

F. Contaminant Removal

While we do not expect to encounter hazardous waste/soils based on our investigations, if they are encountered all waste/contaminated soils will be removed from in and around the cesspools until visibly clean soil is reached. Removal will be by excavation. Disposal of the waste will

follow the requirements of 6 NYCRR Part 360. Note that Attachment 3, Section 21500 of the specification requires both visual inspection and the use of a PID hand held VOC monitor at each injection well. Liquid wastes will be removed by a Suffolk County licensed hauler and disposed at a licensed scavenger waste facility.

G. On-site Storage of Excavated Material

On-site storage of material found to be hazardous will be in tarp covered roll off containers until disposal.

H. Waste characterization

We reference section II – A.1 of USEPA Region 2 UIC Program Instructions, "Large capacity cesspools that have received only sanitary waste". From the Region 2 Instructions, which discuss well specific sampling requirements, "Large Capacity" means serves or designed to serve 20 or more people per day. The cesspools must be pumped out and the wastes must be disposed of properly by a licensed hauler. Excavation, end-point sampling and analysis are typically not required. The waste/fluids that entered the Class V wells previously were untreated sanitary waste containing human excreta. Thus no testing will be conducted, other than visual inspection and use of a hand help VOC monitor.

I. Backfill

Sites will be backfilled with clean inert sand.

J. Final Report

A Final Remediation/ Closure Report will be issued upon completion of the construction project closing the subject class V wells. In addition updated EPA Inventory Forms will be submitted based on as-built drawings of the construction. Construction is expected to be completed in the Summer/Fall of 2017. The reports will be sent to:

Chief
Ground Water Compliance Section
U.S. Environmental Protection Agency
290 Broadway, 20th Floor
New York, NY 10007-1866

Attachment 1

Work Plan

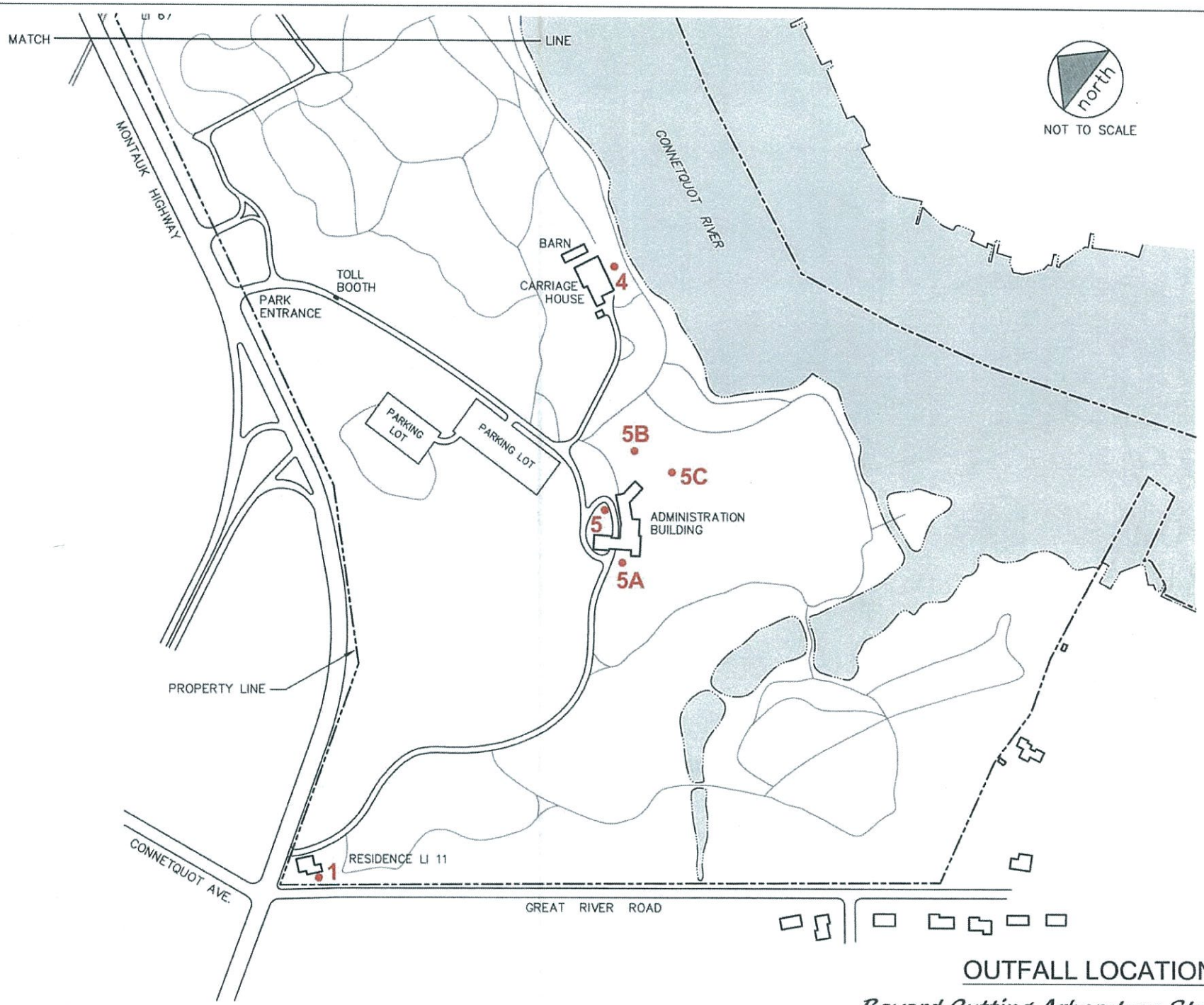
Bayard Cutting Arboretum - Design Basis / Work Summary & SPDES Inventory **5/19/2016**

Original Outfall #	New SPDES #	Location	Original SPDES Design Flow Gallons/ Day	New SPDES Design Flow Gallons/ Day	Flow Basis	Septic Tank	Grease Trap	Pump Station	Leaching Area	Leaching Configuration	Comments
1	**001**	Residence LI-11	300	300	Residence	Existing			Existing		No change.
2	**002**	Residence LI-67	300	300	Residence	Existing			Existing		Locate lp's. Bring lp's to grade with castings.
3	**003**	Residence LI-10	300	300	Residence	1,200 gallons 8 ft. dia. x 4 ft. eff.			300 sf	2 - 8 ft. dia. x 6 ft. eff. Depth lps	Pump, close and abandon/remove two brick cesspools. Install 1200 gallon septic tank and 300 sf of leaching area.
4	**004**	Carriage House	4,950	875	SCDHS Stds. 5 gpcd for 175 cap. Meeting room	2,000 gallons 10 ft. dia. x 4 ft. eff.		Flygt Micro 10 Duplex Grinder Pump Station	600 sf	10 ft. dia. x 6 ft. eff. Lp	Pump, close and remove the septic tank and abandon the leaching area. Replace house connection lines. Install a duplex grinder pump station at the current septic tank location and pump 250 feet to an upland clear area to the southwest of the building. Install a 2,500-gallon septic tank with approximately 600 sf of leaching area.
5	**005**	Administration Building Offices (Inside Restrooms)	5,850	3,985	SCDHS Stds. 1,165 gpd (café + catering) + 375 gpd Museum + 5B & 5C below = 3,985 gpd	9,000 gallons 2 - 12 ft. dia x 6 ft. eff.			2,756 sf	26 - 4 ft. eff. depth leaching galleys = 2,756 sf.	Pump, close and abandon existing cesspool(s) and leaching areas. Install 9,000 gallon septic tank, and new sewer lines. Connect all discharges to septic tank. Install galleys in lawn area.
5A**	**006**	Administration Building Café (Kitchen System)		1,970	SCDHS Stds. (café & catering) 1,970 gpd	4,500 gallons 12 ft. dia. x 6 ft. eff.	2,500 gallons 10 ft. dia. x 5 ft. eff.		1,334 sf	4 -10 ft. dia. x 10 +/- ft. eff. Lps	Pump, close and abandon existing cesspools. Remove 3 trees. Install 2,500 gallon grease trap,4,500 gallon septic tank, and 1,350 sf leaching area. Relocate/extend cable away from disposal system. Replace trees at a different location. Replace plantings and brick walkway.
5B**	**N/A**	Administration Building Public Restrooms (East End Outside Restrooms)		N/A	SCDHS Stds. 15 gpd/parking space 65% of parking used in calculation = 2,145 gpd Included in 005	N/A					Pump, close and abandon existing cesspool(s). Reroute existing plumbing in basement. Move discharge point to south wall. Repair existing wall penetrations where plumbing has been removed. Reroute to outfall 005.
5C	**N/A**	Apartment & Slop Sink		N/A	300 gpd Included in 005	N/A					Pump, close and abandon existing cesspool(s). Reroute to outfall 005.
6	**007**	Cow Barn	1,350	250	SCDHS Stds. ~3200 sf x .06 gpdsf Treated as Office Space	1,200 gallons 8 ft. dia. x 4 ft. eff.			Existing		Pump, close and abandon (1) / remove (1) existing cesspools. Install 1,200 gallon septic tank . Bring existing leaching pools to grade. Seal floor drains in milking area. Abandon floor drain cesspool. Bring to grade and install locking covers on all sanitary leaching pools.
7	**008**	Maintenance Barn	250	250	SCDHS Stds. ~6700 sf x .04 gpdsf Treated as Industrial Space	Existing ~ 2,500 gallons			Existing		Sample the liquid in the septic tank, testing for toxic or hazardous discharges. Pump, clean and bring to gradeall sanitary leaching pools. Install locking covers on all leaching pools.

Note ** - Large capacity cesspools to be closed.

Attachment 2

Site Plan Outfall Locations

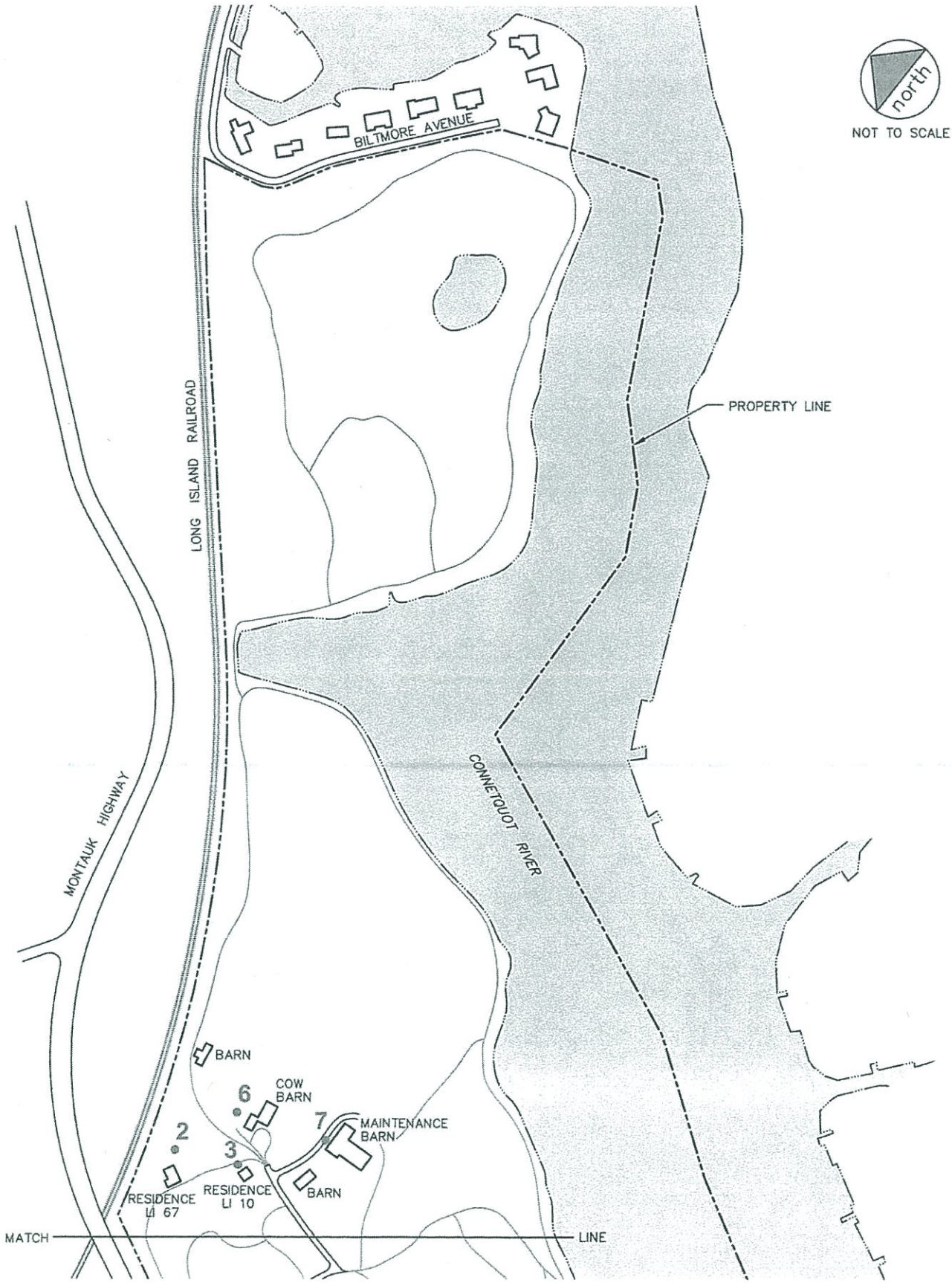


OUTFALL LOCATION PLAN

Bayard Cutting Arboretum State Park
Sanitary Systems Inspection Report

MAP 1 OF 2

Cashin Associates, P.C.
ENGINEERING • PLANNING • CONSTRUCTION MANAGEMENT



OUTFALL LOCATION PLAN

Bayard Cutting Arboretum State Park
Sanitary Systems Inspection Report

MAP 2 OF 2

Cashin Associates, P.C.
ENGINEERING • PLANNING • CONSTRUCTION MANAGEMENT

Attachment 3

Underground Injection Control

Structure Closure Specifications

SECTION 021500
UNDERGROUND INJECTION CONTROL STRUCTURE CLOSURE

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope of Work:

1. The Contractor shall furnish all labor, materials, supplies, equipment, power, facilities and incidentals necessary to properly close existing underground injection control (UIC) structures located throughout the site, as shown on the Drawings. Work includes, but is not limited to, removal and disposal of standing liquids within the structures, removal of sludge and soil from the bottom of the structures, collection and analysis of endpoint sample(s) from the bottom of the structures, and backfilling and sealing the structures.

2. Closure of the Underground Injection Control (UIC) structures must be conducted in accordance with all applicable federal, state and local regulations. Specifically, closure must be conducted in accordance with the Suffolk County Department of Health's (SCDHS's) "Standard Operating Procedure for the Administration of Article 12 of the Suffolk County Sanitary Code" with sampling only where directed by the Engineer, or as indicated on the drawings, and the approved UIC Closure Plan, as provided by the Owner.

3. The work shall include removal of all materials regardless of type, character, composition, weight, size or condition.

4. All waste generated during completion of the Work shall be managed in accordance with Section 021300, Waste Transportation and Disposal, and all applicable federal, state and local regulations.

5. The Work shall include all temporary means to manage and control storm water discharge, and prevent siltation and sedimentation of existing storm water management systems during the performance of the Work.

6. The Contractor shall examine the areas and conditions under which Work shall be performed. The Contractor shall correct all conditions detrimental to proper and timely completion of the Work and shall not proceed until unsatisfactory conditions have been corrected. The Contractor shall immediately notify the Owner of any perceived differences in existing conditions which may impact the Work.

7. At all times during closure activities, the Contractor shall provide equipment and facilities to remove all generated wash water. The Contractor shall be responsible for excavating and backfilling, in accordance with these Specifications, any soil contaminated due to improper containment of wash water at no additional expense to the Owner.

8. Contractor shall have a PID hand held VOC Monitor, Mini RAE Lite Model PGM-7300 or equivalent, on site to monitor all open excavations before backfilling.

B. Related Work Specified Elsewhere.

1. Section 026100, "Storage, Handling, Transportation And Disposal Of Petroleum-Contaminated Material And/Or Hazardous Wastes"

1.2 SUBMITTALS

A. UIC Closure Procedures:

1. Contractor shall submit closure procedures to the Engineer for approval. The procedures shall specify all procedures, equipment, materials and manpower which will be utilized to close each respective UIC structure.

1.3 PERMITS AND REGULATIONS

A. The Contractor shall prepare all required submittals and obtain all necessary permits and approvals and pay all fees for the Work as required by federal, state and local agencies, including the New York State Department of Environmental Conservation (NYSDEC), Suffolk County, and the United States Environmental Protection Agency (USEPA) as applicable.

B. The Contractor shall perform all Work in strict compliance with all applicable requirements of governing authorities having jurisdiction, including NYSDEC, Suffolk County, and the USEPA as applicable.

C. The Contractor is advised that all excavation work shall be in strict compliance with Occupational Safety and Health Administration (OSHA), Title 29, Code of Federal Regulations 1926, Subpart P: Excavation and Industrial Code Rule 23 as established by the New York State Department of Labor.

1.4 MANAGEMENT OF LIQUID WASTE

A. The Contractor shall be responsible for collecting, managing and disposing of all water and liquid waste present within the UIC structure at the beginning of construction, and any water and liquid waste entering the UIC structure as a result of construction activities. This includes, but is not limited to, water resulting from maintaining excavations, cleaning the UIC structures and any storm water.

B. At all times during construction, the Contractor shall provide equipment and facilities to remove all water entering excavations from any sources. All excavations shall be kept dry so as not to impede construction or result in damage or loss of integrity of any complete Work.

C. The Contractor shall provide and maintain pumps, sumps, suction and discharge lines, dikes, berms or other controls as necessary to convey liquids away from the

Engineer. All contaminated soil excavated shall be disposed off-site in accordance with Section 021300, Waste Transportation and Disposal.

E. The Contractor shall be responsible for all structural support, bracing, shoring, backfilling etc., necessary to prevent damage, to nearby structures scheduled to remain.

F. Where directed by the Engineer, an endpoint sample shall be collected from the bottom of the excavation, as specified by Section 016520, Sampling Plan. No backfilling shall take place until approval of the endpoint sampling results by the Owner and, as applicable, the USEPA and NYSDEC. There shall be no claims for changes in Contract Time or Contract Price as a result of the Owner's, Engineer's, USEPA's or NYSDEC's review of endpoint sample results. Should the Contractor backfill the excavation prior to the approval of the endpoint sample results to maintain the integrity of the excavation, such work is at the Contractor's risk. Should additional excavation be required, all such backfill shall be removed and handled, as directed by the Engineer, at no additional cost to the Owner.

G. Once the Contractor has obtained approval of the endpoint sample results, the excavation shall be backfilled unless the structure is to be replaced at the same location. Backfill and compaction shall be completed in accordance with the requirements specified in Section 310000, Earthwork.

H. For manholes to be abandoned in place, the Contractor shall seal with grout all sewer lines entering or exiting the manhole and shall fracture the bottom of the manhole to expose the soil below. The remaining structure shall be backfilled. Backfill and compaction shall be completed in accordance with the requirements specified in Section 310000, Earthwork.

3.3 SEPTIC SYSTEM CLOSURE

A. The Contractor shall remove the debris, and soil in the vicinity of the septic system to completely expose the septic tank and associated discharge piping.

B. The Contractor shall remove the dome, top slab and/or "stack" of the septic tank, including the manhole rims and covers, if present, to provide an open excavation which extends from ground surface to the bottom of the septic tank.

C. All liquids and sludge shall be removed from the septic tank and placed immediately into approved liquid waste hauling vehicles for off-site disposal.

D. Where removal is indicated on the drawings or as directed by the Engineer, the Contractor shall excavate and completely remove the septic tank and associated drainage piping. Excavation of any visually stained soil or soil exhibiting elevated PID readings shall be accomplished as specified in Section 31000, Earthwork, as directed by the Engineer. All contaminated soil excavated shall be disposed off-site in accordance with Section 021300, Waste Transportation and Disposal.

E. The Contractor shall be responsible for all structural support, bracing, shoring, backfilling etc., necessary to prevent damage, to nearby structures scheduled to remain.

F. The septic tank(s) shall be removed and/or abandoned in place as indicated on the drawings. Where the drawings indicate the tank is to be abandoned in place the bottom slab of the septic tank(s) shall be completely broken-up to allow proper drainage. The septic tank(s) shall be backfilled and compacted in accordance with the requirements specified in Section 310000, Earthwork.

G. Where directed by the Engineer, an endpoint sample shall be collected from the bottom of the excavation, as specified by Section 016520, Sampling Plan. No backfilling shall take place until approval of the endpoint sampling results by the Owner and, as applicable, the USEPA and NYSDEC. There shall be no claims for changes in Contract Time or Contract Price as a result of the Owner's, Engineer's, USEPA's or NYSDEC's review of endpoint sample results. Should the Contractor backfill the excavation prior to the approval of the endpoint sample results to maintain the integrity of the excavation, such work is at the Contractor's risk. Should additional excavation be required, all such backfill shall be removed and handled, as directed by the Engineer, at no additional cost to the Owner.

H. Once the Contractor has obtained approval of the endpoint sample results, the excavation shall be backfilled unless the structure is to be replaced at the same location. Backfill and compaction shall be completed in accordance with the requirements specified in Section 310000, Earthwork.

3.4 FLOOR DRAIN / TRENCH DRAIN CLOSURE

A. The Contractor shall remove all debris and soil in the vicinity of the floor drain to completely expose the extent of the drain.

B. The Contractor shall remove all floor/trench drain covers.

C. The Contractor shall prepare floor/trench drain surfaces as required to receive concrete fill.

D. The Contractor shall fill floor/trench drains with concrete flush with the existing floor. Before filling trench drains any outlet piping shall be capped. Concrete shall be in accordance with Section 033010, "Cast-In-Place Concrete", and Section 036100, "Grouting and Patching."

END OF SECTION